REMARKS

Applicants have studied the Office Action dated May 26, 2011 and have made amendments to the claims. Claims 1-46, 49, 50, 54, 55, 57 and 58 were previously canceled without prejudice. Claims 47 and 52 have been amended. No new matter has been added as the amendments have support in the specification as originally filed. It is submitted that the application, as amended, is in condition for allowance. Reconsideration and is respectfully requested.

Definition of Terms

Prior to discussing the merits of the amended claims with respect to the prior art cited by the Examiner, Applicants respectfully define particular claim terms to clarify their meaning on the record.

Applicants note that paragraph [0030] of the published specification (US 2007/0112932 A1) discloses that "the AV Transport service and the Rendering Control service are defined by the UPnP." "The UPnP, which is defined by a protocol of the standard network architecture, is one of the major standard technologies of the home network which a plurality of companies in each country create through the UPnP forum." See paragraph [0004] of the published specification. Therefore, Applicants submit that the terms "AV transport service," "transport state information," "rendering control service" and "rendering state information" as recited in the pending claims, are well-supported by the specification as originally filed, and defined by standardized specification documents of the UPnP.

Regarding the claimed term "AV transport service," Applicants refer the Examiner's attention to the enclosed document titled UPnP AV Architecture:0.83, Contributing Members of the UPnP Forum, June 12, 2002 (hereinafter "UPnP 0.83"). Page 6, last full paragraph of UPnP 0.83 provides that AVTransport actions include actions such as "Stop, Pause, FF, REW, Skip, Scan, etc." Page 7, section 5.1.3 of UPnP 0.83 provides that AVTransport Service "is used by the Control Point to control the 'playback' of the content that is associated with the specified AVTransport. This includes the ability to Stop, Pause, Seek, etc." Page 8, section 5.2.3 of UPnP 0.83

further states that the AVTransport Service "is used by the Control Point to control the flow of the associated content" which "includes the ability to Play, Stop Pause, Seek, etc." Furthermore, page 5 of the enclosed document titled AVTransport:1 Service Template Version 1.01, Contributing Members of the UPnP Forum, June 25, 2002 (hereinafter "AVTransport:1 1.01") states that the AVTransport service "enables control over the transport of audio and video streams."

Regarding the claimed term "transport state information," Applicants refer the Examiner's attention to AVTransport:1 1.01. Page 6 of AVTransport:1 1.01 provides a table of state variables associated with the AVTransport Service (see Table 1). The first entry of Table 1 includes the state variable TransportState. Page 7 of AVTransport:1 1.01 provides a table of allowed values for TransportState (see Table 1.1). The allowed values identified for TransportState in Table 1.1 include STOPPED, PLAYING, TRANSITIONING, PAUSED_PLAYBACK, PAUSED_RECORDING, RECORDING and NO_MEDIA_PRESENT. Additionally, page 10, section 2.2.1 of AVTransport:1 1.01 states that the state variable TransportState "forms the 'core' of the AVTransport service" and "defines the conceptually 'top-level' state of the transport, e.g., whether it is playing, recording, etc."

In view of the descriptions found in the UPnP standardized specification documents, one of ordinary skill in the art would know that the term "AV transport service" as recited in the pending claims refers to a service for controlling playback of content associated with a specified AVTransport action such as Play, Stop, Pause, Seek, FF, REW, Skip, Scan, etc. Moreover, based on the descriptions found in the UPnP standardized specification documents, one of ordinary skill in the art would know that the term "transport state information" as recited in the pending claims refers to a flow status of transported media, such as stopped, playing, transitioning, paused playback, paused recording, recording or no media present, for example.

Regarding the claimed term "rendering control service," Applicants refer the Examiner's attention to UPnP 0.83. Page 6, last full paragraph of UPnP 0.83 provides that a "Control Point is also able to control the various rendering characteristics on the Renderer device such as Brightness, Contrast, Volume, Balance, etc." Page 8, section 5.2.1 of UPnP 0.83 provides that RenderingControlService "provides a set of actions

that allow the Control Point to control how the Renderer renders a piece of incoming content" which "includes rendering characteristics such as Brightness, Contrast, Volume, Mute, etc."

Furthermore, page 6 of the enclosed document titled RenderingControl:1 Service Template Version 1.01, Contributing Members of the UPnP Forum, June 25, 2002 (hereinafter "RenderingControl:1 1.01") explains that "rendering devices contain a number of dynamically configurable attributes that affect how the current content is rendered" (see section 1.1). It also states that "video rendering devices, such as TVs, allows user control of display characteristics such as brightness and contrast, whereas audio rendering devices allow control of audio characteristics such as volume, balance, equalizer settings, etc." Therefore, the RenderingControl service "is intended to provide Control Points with the ability to query and/or adjust any rendering attribute that the device supports." See page 6, section 1.1 of RenderingControl:1 1.01.

Regarding the claimed term "rendering state information," Applicants refer the Examiner's attention to RenderingControl:1 1.01. Pages 7-8 of RenderingControl:1 1.01 provides a table of state variables associated with the RenderingControl Service (see Table 1). Entries in Table 1 include the state variables Brightness, Contrast, Sharpness, Volume, etc. Applicants further note that Table 1 allows for a minimum value and a maximum value of a state variable to be identified.

In view of the descriptions found in the UPnP standardized specification documents, one of ordinary skill in the art would know that the term "rendering control service" as recited in the pending claims refers to a service for controlling a dynamically configurable video and/or audio characteristic of the playing device such as brightness, contrast, sharpness or volume, for example. Moreover, based on the descriptions found in the UPnP standardized specification documents, one of ordinary skill in the art would know that the term "rendering state information" as recited in the pending claims refers to a video and/or audio characteristic value of the playing device, such as a brightness value, contrast value, sharpness value, or volume value of the playing device used for rendering content at the playing device.

Applicants further wish to clarify the definition of the term "render" and its various forms (e.g. "rendering," "rendered," etc.) as may be recited in the pending claims above

and the remarks below. Page 5, section 5, first full paragraph of UPnP 0.83 provides that "[t]he most common task that end-users want to perform is to render (i.e. play) individual items of content on a specific rendering device." Page 5, section 5, second full paragraph of UPnP 0.83 further provides that "the MediaServer contains (entertainment) content that the user wants to render (e.g. display or listen to) on the MediaRenderer." Therefore, according to the description found in UPnP 0.83, the term "render" means to play, display or listen to content.

Applicants further note that the meaning of the term "rendering" with respect to the present application is different from the meaning of the term "rendering state information" or "rendering state." In view of the explanation above, the term "rendering" is related to playing, displaying or listening to content, whereas the term "rendering state information" or "rendering state" is related to a video and/or audio characteristic value of the playing device, such as a brightness value, contrast value, sharpness value, or volume value of the playing device used for rendering content at the playing device.

Rejections under 35 U.S.C. § 112

Claims 47 and 52 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

On pages 7-9 of the Office Action, the Examiner asserts that claimed features related to a "volume value" are not supported in the specification. Applicants respectfully disagree. Nonetheless, to expedite prosecution of the present application, the term "volume value" has been deleted from the claims. Moreover, Applicants note that in some instances, features related to a "volume value" have been amended to relate to a "video and/or characteristic value of the playing device." Support for the amended limitations can be found, for example, in paragraphs [0031] to [0033] and FIGS. 2-3 of the published specification (US 2007/0112932 A1), and in view of the discussion above under the heading Definition of Terms.

On pages 7-8 of the Office Action, the Examiner asserts that the feature "wherein transport state information is associated with a streaming status of the media content and is used by an audio/video (AV) transport service" is not supported in the

specification. The Examiner further states that the disclosure is silent on defining the AVTransport status as a "streaming status." With this paper, the noted feature has been amended to now recite "wherein transport state information is associated with an audio/video (AV) transport service and the AV transport service is used for controlling a transport flow of the media content." Applicants respectfully submit that the specification well supports the amended limitation in view of the discussion above under the heading Definition of Terms.

On pages 8-9 of the Office Action, the Examiner asserts that the feature "according to the set rendering state information such that the playing device renders the streamed media content using the stored volume value transmitted from the server" is not supported in the specification. With this paper, the noted feature has been amended to now recite "according to the set rendering state information such that the playing device renders the transported media content using the video and/or audio characteristic value of the playing device included in the rendering state information." Applicants submit that the amended feature complies with the written description requirement.

In view of the foregoing, it is respectfully submitted that claims 47 and 52 overcome the rejection under 35 U.S.C. § 112, first paragraph.

Rejections under 35 U.S.C. § 103

Claims 47, 48, 51-53 and 56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2004/0243700 A1 to Weast (hereinafter "Weast") in view of US 2003/0046338 A1 to Runkis (hereinafter "Runkis"). This rejection is respectfully traversed.

As amended, independent claim 47 has been clarified to include the following features:

a) matching a protocol and a data format between the server and the playing device, the server and the playing device configured in the pull mode;

b) requesting the playing device matched with the server in the protocol and the data format to receive and render media content streamed from the server, wherein transport state information is associated with an audio/video (AV) transport service and

the AV transport service is used for controlling a transport flow of the media content, wherein rendering state information is associated with a rendering control service and the rendering control service is used for controlling a dynamically configurable video and/or audio characteristic of the playing device, and wherein when the server and the playing device are configured in the pull mode, both the AV transport service and the rendering control service are executed by the playing device;

c) transmitting, when playback of the media content by the playing device is paused, a request to the playing device to transmit the transport state information and the rendering state information, the transport state information including a transport flow status of the media content at the time of pausing the media content, and the rendering state information including a video and/or audio characteristic value of the playing device at the time of pausing the media content;

d) requesting the server to store in the server, the transport state information transmitted from the playing device to the at least one control device, and the rendering state information including the video and/or audio characteristic value of the playing device transmitted from the playing device to the at least one control device, wherein the at least one control device performs a resuming playback operation from a paused part of the paused media content when playback of the paused media content is resumed by the playing device;

e) wherein the resuming playback operation comprises: receiving the stored transport state information and the stored rendering state information from the server, transmitting a first command including the stored transport state information received from the server to the playing device to set the playing device with the stored transport state information included in the first command, transmitting a second command including the stored rendering state information received from the server to the playing device to set the playing device with the stored rendering state information included in the second command; and

f) wherein the media content is transported from the server to the playing device according to the set transport state information such that the media content is transported from the paused part of the media content indicated by the transport flow status included in the transport state information and is rendered in the playing device

according to the set rendering state information such that the playing device renders the transported media content using the video and/or audio characteristic value of the playing device included in the rendering state information.

Amended independent claim 52 recites similar features.

The Examiner asserts that Weast teaches or suggests various features of the claimed invention. In particular, on page 12 of the Office Action, the Examiner asserts that Weast discloses the claimed feature "requesting the server to store in the server…the rendering state information including the volume value transmitted from the playing device to the at least one control device." On page 3 of the Office Action, the Examiner also comments: "It is well known in the art that all media is recorded and stored at a certain volume level and the louder or softer the recording, the louder or softer the playback unless some sort of clipping or compression is applied during playback. Therefore the media content always has a volume value stored with it." Applicants provide the following remarks.

With this paper, Applicants have amended independent claim 47 to recite "requesting the server to store in the server…the rendering state information including the video and/or audio characteristic value of the playing device transmitted from the playing device to the at least one control device" (emphasis added). Applicants note that the video and/or audio characteristic value of the playing device is a value of the playing device at a time when playback of the media content at the playing device is paused (see claim 47 and item c) above). Independent claim 52 has been similarly amended.

Applicants respectfully submit that Weast does not disclose the amended claim feature. With regard to the disclosure of Weast and the Examiner's comments on page 3 of the Office Action, Applicants respectfully submit that there is a distinction between a volume value of media content as may be taught by Weast and which the Examiner asserts is always stored with the media content, and a video and/or audio characteristic value of a playing device, which is stored in a server when media content previously rendered at the playing device is paused, as required by the amended claims. The distinction lies in that the volume value of media content is a characteristic value of media content (Weast), whereas the video and/or audio characteristic value of the

claimed invention is a characteristic value of a playing device.

Accordingly, in view of the above discussion, it is respectfully submitted that Weast fails to teach the following recited features of claim 47: "requesting the server to store in the server…the rendering state information including the video and/or audio characteristic value of the playing device," "transmitting a second command including the stored rendering state information received from the server to the playing device to set the playing device with the stored rendering state information included in the second command," and "wherein the media content…is rendered in the playing device according to the set rendering state information such that the playing device renders the transported media content using the video and/or audio characteristic value of the playing device included in the rendering state information." Applicants also submit that Weast fails to disclose similarly recited features in claim 52.

Applicants further submit that Runkis fails to cure the above-identifed deficiencies of Weast. On pages 14-15 of the Office Action, the Examiner states that paragraph [0078] Runkis discloses the user requesting to continue playback of a movie which includes the rendering state of where the user stopped watching previously and data content control of where to restart the audio and video playback content services, the resumption information being audio and visual characteristics of playback. Paragraph [0078] of Runkis states: "a transient user can start watching a feature movie in one service zone, e.g. on a flight from New York to Chicago, pause the movie when the plane arrives at the airport in Chicago, change planes, and continue watching the movie, *from the point that at which it was interrupted*, on a different plane or even a different airline during the continuing flight, e.g. to San Francisco" (emphasis added).

However, as clarified in the amended independent claims, the stored rendering state information includes a video and/or audio characteristic value of the playing device, wherein the video and/or audio characteristic value of the playing device is stored in the server when playback of the media content is paused at the playing device. Thus, although Runkis may disclose a state where the user stops watching content previously and data content control of where to start the audio and video playback, Applicants submit that in view of the amended claim, and the definition provided above for the term "rendering state information," Runkis' disclosure does not

teach or suggest storing rendering state information including a video and/or audio characteristic value of the playing device in the server when playback of the media content is paused at the playing device, as required by the amended independent claims.

In view of the foregoing, it is respectfully submitted that claims 47 and 52, and the claims respectively dependent thereon, are allowable over the combination of Weast and Runkis.

CONCLUSION

In light of the above remarks, Applicants submit that the present Amendment places all claims of the present application in condition for allowance. Reconsideration of the application is requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California, telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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